

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of processing an image, comprising:
receiving one or more sub images within an image;
separating each sub image from the image;
associating a template with each sub image;
using one or more feature vectors associated with each template to locate one or more features within each of the sub images each feature represented by three pixel coordinates from the sub image being examined, wherein each of the feature vectors is ~~are~~ represented as a collection of three pixel coordinates for each sub image, wherein a first pixel coordinate represents a center or origin of the sub image being examined, a second pixel coordinate represents an edge coordinate along a x-axis extending eastward or westward from the origin, and a third pixel coordinate represents a different edge coordinate along a y-axis extending northward or southward from the origin, and wherein each sub image graphically representing an instrument that has a visual reading captured and depicted within the sub image a graphical symbol, and a geometric shape for each instrument graphical symbol also reflected in each of the feature vectors ~~vector~~ to which it relates along with its coverage attributes within the image, wherein the geometric shape and the coverage attributes are derivable from the three pixel coordinates associated with the sub image being examined and defined in the sub image's feature vector; and
processing one or more rules associated with one or more of the located features acquired from each of the feature vectors to derive a particular visual reading for a particular sub image representing a particular instrument depicted in the image, wherein each located feature is acquired by comparing the three pixel coordinates identified in the particular sub image to each of the feature vectors and each feature vector's three pixel coordinates.
2. (Original) The method of claim 1 further comprising calculating an instrument reading from one or more of the located features using one or more of the associated rules.

3. (Original) The method of claim 2 further comprising electronically transmitting the instrument reading.
4. (Original) The method of claim 3 wherein the instrument reading is associated with one of the sub images, which represents a picture of an instrument panel.
5. (Original) The method of claim 1 further comprising, periodically repeating all the steps.
6. (Original) The method of claim 5 wherein a period to repeat the steps is customizable.
7. (Currently Amended) A method of converting an instrument reading to digital information storage on a computer readable medium, comprising:
 - receiving an electronic image of an instrument having one or more image features necessary for resolving an instrument reading;
 - isolating each image feature within the image by comparing three pixel coordinates of each isolated image to its own feature vector, wherein each feature vector is a collection of at least three or more pixel coordinates for each isolated image, wherein a first pixel coordinate represents an origin coordinate for the isolated image being examined, a second pixel coordinate represents an eastward or westward coordinate extending from the origin coordinate, and a third pixel coordinate representing a northward or southward coordinate extending from the origin coordinate, and each isolated image representing a graphical symbol, and a shape for each graphical symbol also reflected in the feature vector to which it relates along with its coverage attributes within the electronic image, wherein the graphical symbol and the coverage attributes for any given isolated image is derivable from the corresponding at least three pixel coordinates defined in the given isolated image's feature vector;
 - mapping or calculating each isolated image feature to its own value using each feature's at least three sampled coordinates, the value associated with each isolated image feature's orientation within the image; and
 - determining the instrument reading by performing a calculation on the values in response

to each isolated image's feature vector.

8. (Original) The method of claim 7 further comprising calibrating the isolating step one time before capturing the image.

9. (Original) The method of claim 8 further comprising determining an degree of angular orientation associated with calibrating and using the angular orientation in isolating each image feature.

10. (Original) The method of claim 7, wherein the instrument is a control panel.

11. (Original) The method of claim 10 wherein the control panel is associated with at least one of an aircraft, a marine vehicle, and a land vehicle.

12. (Currently Amended) A method of processing an image, comprising:

identifying one or more sub images which are associated with an image of one or more instrument panels of one or more devices;

identifying values represented by one or more located features within each sub image by using one or more templates each located feature represented by three pixel coordinates, wherein each template includes one or more rules to assist in identifying the values and each template associated with a feature vector and the feature vector representing a shape of a particular sub image and coverage area of the particular sub image and angular position of the particular sub image within the image, and wherein the feature vector identifies the shape, coverage area, and angular position by selectively defining at least three pixel coordinates identified within the particular sub image; and

using the values to generate one or more readings for one or more of the instrument panels of one or more of the devices in response to the feature vector.

13. (Currently Amended) A computer readable medium having an image template used to process image data, comprising:

a template type uniquely identifying the template and assigned to a defined region of the image;

one or more feature recognition attributes; and

a feature recognition vector associated with detecting a feature image within the defined region by searching the defined region for one or more of the feature recognition attributes, wherein the feature recognition vector is represented as a value for three selective pixel coordinates for the feature image and the feature image representing a graphical symbol, and a shape for each graphical symbol also reflected in the feature recognition vector to which it relates along with its coverage attributes within the image.

14. (Original) The template of claim 13 further comprising, one or more attribute rules associated with the template type, wherein one or more of the rules and operable to be used by a processing set of executable instructions to extract or associate information from the feature image.

15. (Original) The template of claim 14 wherein the information includes associating an instrument reading with the feature image.

16. (Original) The template of claim 15 wherein instrument reading depends on a detected orientation of feature image within the image data.

17. (Original) The template of claim 14 wherein the information includes extracted numeric characters, symbol characters, or alpha characters.

18. (Original) The template of claim 17 wherein the information is extracted using an optical character recognition set of executable instructions.

19. (Currently Amended) A computer readable medium having functional data stored thereon used to translate image data, the function data comprising:

image data including one or more instrument images;

rules data uniquely associated with one or more of the instrument images;
processing instruction data operable to isolate each instrument image and use the rules data to detect one or more reading indicators within each instrument image and translate one or more of the reading indicators into an instrument reading represented by the image data, and wherein the rules data samples each reading indicator for three pixel coordinates, which are compared to existing values that are used in resolving the instrument reading, and wherein three pixel coordinates represent an angular position and shape for each reading indicator, and wherein the existing values are defined in a feature vector as having at least three pixel coordinates representing an origin, a west or east boundary, and a north or south boundary.

20. (Original) The functional data of claim 19, further comprising transmitting instruction data operable to transmit one or more of the reading indicators and the instrument reading.

21. (Original) The functional data of claim 19, further comprising attribute data used by the rules data, wherein the attribute data include one or more attributes associated with each instrument image.

22. (Currently Amended) A system for capturing and processing images, comprising:
a camera to capture an image;
a template uniquely associated with a sub image of the image;
a feature vector defining a feature within the sub image, wherein the feature vector identifies three coordinate points within the sub image for the feature of the sub image, wherein a first coordinate point represents an origin point within the sub image, a second coordinate point represents an eastward or westward point, and a third coordinate point represents a northward or southward point, and the sub image representing a graphical symbol, and a shape for the graphical symbol also reflected in the feature vector along with its coverage area attributes within the image, and the graphical symbol, coverage area attributes, and shape are derivable from the three coordinate points; and

a processing set of executable instructions operable to extract a location of the feature within the sub image by using the template and the feature vector and by taking three coordinate

points from the sub image to compare with the feature vector and the feature vector's three coordinate points, and wherein the template includes one or more rules for the feature.

23. (Original) The system of claim 22 further comprising, a mapping set of executable instructions operable to map the location to a value.
24. (Original) The system of claim 23 wherein the value is associated with a reading on an instrument panel.
25. (Original) The system of claim 23 further comprising, a recording set of executable instructions operable to record the value.
26. (Original) The system of claim 22 further comprising, a camera controlling set of executable instructions operable to capture one or more additional images at configurable periods.
27. (Original) The system of claim 22 further comprising, one or more additional cameras capturing one or more additional images.
28. (Original) The system of claim 22 further comprising, an image enhancing set of executable instructions operable to improve a quality associated with the image before being processed by the processing set of executable instructions.
29. (Original) The system of claim 22 further comprising, a calibration set of executable instructions operable to calibrate the captured image.